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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/554,090	06/14/2000	MIROSLAV CHMELIR	6272-0049-0P	4228

7590

02/25/2002

OBLON SPIVAK MCCLELLAND
MAIER & NEUSTADT
1755 JEFFERSON DAVIS HIGHWAY
FOURTH FLOOR
ARLINGTON, VA 22202

EXAMINER

ZALUKAEVA, TATYANA

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 02/25/2002

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/554,090

Applicant(s)

CHMELIR ET AL.

Examiner

Tatyana Zalukaeva

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action appeared in the Appeal Brief is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 13-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (U.S. 4,954,562) in view of Chmelir (U.S. 4,929,717).

Anderson discloses a method of making **water absorbing** crosslinked acrylate resins by aqueous polymerization of **(A) acrylic acid neutralized 70 to 100 mole percent for example with ammonia and/or caustic alkali and/or an amine**; with (B) acrylamide in a mole ratio of 70 to 100 mole percent (A) to 30:0 mole percent (B); (C) styrene, in an amount of 0% to 25% based on the weight of acrylic acid or acrylate; and (D) a water miscible or a water soluble polyvinyl monomer in the presence of (E) a metal oxide, such as titanium dioxide, in an amount of 0.001% to 5% based on the total weight of (A), (B), (C), (D) and (E), such that the amount of (D) is 0.001 to 0.6 weight percent based on the total weight of (A), (B), (C), (D) and (E) (abstract, col. 3, lines 27-39). Polymerization takes place in the presence of one or more polymerization initiators. (col. 4, lines 9, 10, col. 10, lines 9-40). Ammonium hydroxide and ammonium carbonate are used as neutralizing agents (col. 5, lines 23-26)

In accordance with Anderson's invention the residual monomer content can be achieved less than 100 ppm (col. 11, lines 5-11). The polymerization proceeds very fast and usually requires from 30 sec to about 10 minutes (col. 11, lines 35-38).

Therefore the limitations of claim 24 and dependent claims for providing acid monomer with comonomers partially or completely neutralizing the monomer with basic nitrogen containing compound, and free radical polymerizing such monomer(s), as well as basic conditions of the process are fulfilled.

The disclosure of Anderson differs from the instant claims in not disclosing subsequent heating of a polymer at a temperature of 120 to 240°.

However, Anderson provides a motivation to do so by emphasizing two factors:

- a) necessity to obtain polymers with low monomer content
- b) citing several specific examples, wherein the temperature of reaction is 130-135° (Example 19), or 120° (Example 6).

Chmelir discloses a method of preparing homopolymers or copolymers that are water-soluble or swell up in water and **have a low residual monomer content by** treating them with an amine compound. The homopolymer or copolymer in the swollen form and in the form of a gel or in the form of a solution is treated with a compound, such as for example ammonia, an ammonium salt, an alkylamine and/or one of their salts or a hydroxylamine and/or their salts, subsequent to polymerization the resulting polymer gel or polymer solution is **dried at an elevated temperature, which is 50-150°C** (see abstract and col.2, lines 37-38).

Both Anderson and Chmelir intend to develop a process to obtain a polymer with low residual monomer content, and Anderson suggests embodiments with the elevated temperature, not particularly elucidating subsequent treatment of a polymer, one skilled

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in the art would have found it obvious to utilize a drying step of Chmelir in Anderson to further reduce the residual monomer content.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (703) 308-8819. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



TZ
February 21, 2002

Tatyana Zalukaeva
Examiner
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